## ABSTRACT OF THE DISCLOSURE

A clear aqueous formulation for topical application in the oral cavity of humans to treat leukoplakia contains water, β-carotene, a water miscible polyol, an unsaturated fatty acid ester, and a surfactant, preferably polyethoxylated castor oil. The formulation preferably also contains a pharmaceutically acceptable anti-oxidant, preferably d-alpha-tocopherol (vitamin E), and is in the form of an oral rinse or as a gel well suited for spreading on gums or other parts of the oral cavity. The formulation is applied in a gel form on a substantially regular daily basis to areas in the oral cavity where leukoplakia lesions are present. Persistent application of the gel results in substantial diminution or total elimination of the leukoplakia lesions.